ABSTRACT OF THE DISCLOSURE

A method of isolating piezoelectric thin film acoustic resonator devices to prevent laterally propagating waves generated by the device from leaving the device and/or interfering with adjacent devices or systems. Specifically, this isolation technique involves the manipulation or isolation of the piezoelectric material layer between the acoustic resonator devices, in an effort to limit the amount of acoustic energy which propagates in a lateral direction away from the device. In one aspect, at least a portion of the piezoelectric material not involved in signal transmission by transduction between RF and acoustic energy is removed from the device. In another aspect, the growth a piezoelectric material is limited to certain regions during fabrication of the device. In a further aspect, the crystal orientation of the piezoelectric material is disrupted or altered during device fabrication so as to form regions having excellent piezoelectric properties and regions exhibiting poor piezoelectric characteristics.